DOCUMENT RESUME

ED 255 666 CE 041 130

TITLE	Standards for Excellence in Trade and Industrial Education.
INSTITUTION	Vocational Industrial Clubs of America, Leesburg, VA.
SPONS AGENCY	Department of Education, Washington, DC.
PUB DATE	May 85
CONTRACT	300-83-0041
NOTE	74p.
PUB TYPE	Guides - Non-Classroom Use (055)
EDRS PRICE	MF01/PC03 Plus Postage.
DESCRIPTORS	Advisory Committees; Educational Philosophy; Educational Quality; Inservice Teacher Education; Postsecondary Education; Preservice Teacher Education; Program Effectiveness; *Program Evaluation; Secondary Education; *Standards; *Teacher Certification; *Teacher Education; *Trade and Industrial Education

ABSTRACT

This publication presents standards for high quality trade and industrial education. Introductory materials include background on the standards project and information on using the standards. The three primary objectives of the project were to develop: standards for trade and industrial education that are common to all instructional programs at the secondary and postsecondary level, standards for trade and industrial education teacher education programs, and standards for certification of shop, laboratory, classroom and related teachers of trade and industrial education (identified as Levels I, II, and III). Each of the three objectives in the complete set of standards is composed of a set of topics. Each topic has a standard statement to describe the standards and subsequent criteria to be used in assessment. Following each criterion are three columns, one of which is checked during a review to indicate whether the criterion can be deemed as exceeding the standard, meeting the standard, or being below the standard. On the last page of each standard topic is a section entitled "summary of this topic." A "program profile" form is provided after the last page of the standards. (YLB)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED255666

STANDARDS FOR EXCELLENCE

IN

TRADE AND INDUSTRIAL EDUCATION

These standards for excellence in trade and industrial education may also be used by states which no longer use the specific title of trade and industrial education, providing the change is in essence a name change only, and the purpose and philosophies identified under the new title are consistent with the purposes and philosophies identified in the standards for excellence in trade and industrial education.

A Project of the Vocational Industrial Clubs of America, Inc.

Leesburg, VA 22075

for

The United States Department of Education

CE041130

U.S. DEPARTMENT OF EDUCATION
NATIONAL INSTITUTE OF EDUCATION
EDUCATIONAL RESOURCES INFORMATION
CENTER (ERIC)

☒ This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official NIE position or policy.

May 1985

CONTENTS

Page

- Background of the Standards Project 2
- Application of the Standards. 4
- Definition of Trade and Industrial Education. 5
- Standards 6

I. STANDARDS FOR TRADE AND INDUSTRIAL EDUCATION WHICH ARE COMMON TO ALL TRADE AND INDUSTRIAL EDUCATION INSTRUCTIONAL PROGRAMS AT THE SECONDARY AND POSTSECONDARY LEVELS

A-Philosophy. 6

B-Organization and Administration, State Supervison 8

C-Organization and Administration, Local Supervison 11

D-Advisory Committees 14

E-Curriculum and Instructional Planning 16
Industrial Cooperative Education. 22
Specialized Programs for Business/Industry/Adult Supplementary. . 25

F-Leadership Skill Development for Students in Trade and Industrial Programs through VICA 26

G-Instructional Staff 28

H-Facilities and Equipment. 30

I-Personnel Services for Students 32

J-Special Needs 34

K-Program Review. 35

II. STANDARDS FOR TRADE AND INDUSTRIAL EDUCATION TEACHER EDUCATION PROGRAMS

A-Institutional Characteristics 37

B-Qualifications of Trade and Industrial Education Teacher Educators. 40

F-Internships/Inservice 41

D-Competency Profile Preservice/Survival Skills 42

E-Trade and Industrial Teacher Education Program Competencies 44

F-Special Populations Awareness and Information 51

G-Sex Equity. 53

III. STANDARDS FOR CERTIFICATION OF SHOP, LABORATORY, CLASSROOM AND RELATED TEACHERS OF TRADE AND INDUSTRIAL EDUCATION

A-Level I 54

B-Level II. 57

C-Level III 59

- Program Profile 61
- Acknowledgments 63
- Selected References 70

BEST COPY AVAILABLE

The Standards Project

In October 1983, the Vocational Industrial Clubs of America, Inc. (VICA) began a twenty-month project for the U.S. Department of Education to research and produce national standards for excellence in trade and industrial education. The project "Standards for Excellence in Trade and Industrial Education" is designed to define "models of quality" for exemplary trade and industrial education programs. The three primary objectives of the project, as stated by the U.S. Education Department, were:

- To develop standards for trade and industrial education which are common to all trade and industrial education instructional programs at the secondary and postsecondary levels
- To develop standards for trade and industrial education teacher education programs
- To develop standards for certification of shop, lab, classroom, and related teachers of trade and industrial education programs.

From October 1983 through January 1984, a literature review was conducted and a status report was prepared, which was then reviewed with the technical advisory group. This document includes a historical overview of the development of trade and industrial education, teacher education, and teacher certification. It provided a frame of reference for conclusions that led to drafts of the standards in the initial form.

The results of the literature search are included in the "Report of the Review of the Literature" submitted to the U.S. Department of Education. The document is available through ERIC.

Representatives from industry, education, labor, professional associations and other critical groups served as a Technical Advisory Group, (TAG) and on the Review and Expert Committees. A modified "Delphi" study design was used with activities structured to permit experts knowledgeable of trade and industrial education requirements to arrive at a consensus of opinion concerning each objective.

Development of the Standards

In the second phase the status report provided the background for an "item pool" initial draft of components of the standards.

The first draft of the standards in item pool form was considered by the Review Committee. The comments of the Review Committee were tabulated for presentation to the Expert Committee.

The third phase involved the Expert Committee in a workshop in June just prior to the VICA National Leadership Conference and United States Skill Olympics. The Expert Committee responded to the same draft of standards (in item pool form) prior to the workshop. During the workshop, the recommendations of both the Review and the Expert Committees were considered and from this information recommendations were prepared for the review of the U.S. Department of Education. The draft then was presented to the Technical Advisory Group in early September for review and comments.

Phase four provided for validation of the standards during a three-day workshop.

The standards were validated by approximately thirty people who were invited to participate in the validation meeting prior to the December 1984 American Vocational Association Convention in New Orleans, Louisiana. The participants were selected representing the same cross sections as in the three other committees, and from a pool of names suggested by the standards Technical Advisory Group and trade and industrial state supervisors. Also in the pool were names of individuals from education, business, industry, and labor who expressed interest in the project or volunteered to assist and had not been involved in previous activities. This ensured that the validation workshop was conducted by an unbiased group.

The recommendations of the validation workshop participants were reviewed by the Technical Advisory Group in February 1985, and the revisions were submitted to the Department of Education before publication.

During phase five the standards were published and distributed in the Spring of 1985.

The development of standards that are applicable to all trade and industrial instructional programs at the secondary and postsecondary levels, as well as adult training and retraining, should help to unify trade and industrial education and enhance program quality nationwide. National standards for teacher education programs will no doubt eliminate some of the variance found among states in teacher education programs. Standards for certifying teachers will assure teacher quality, a nationwide concern in the 1980's.

This publication includes the standards for all three objectives. These standards for high quality trade and industrial education will provide guidelines to the states as they search for material to maintain excellence in both their vocational programs and teacher education programs and seek to alleviate certification reciprocity problems for teachers.

The standards developed under this U.S. Department of Education contract are included in this document.

It is hoped the standards will be utilized as a mirror to determine strengths and weaknesses for program review. They could serve as models for schools, districts, area centers, and states that wish to develop, modify or adopt standards to maintain excellence in trade and industrial education programs.

BEST COPY AVAILABLE

Using the Standards

An understanding of the three objectives and the classification of the standards is critical before conducting a review of a trade and industrial education program. The set of standards includes three objectives, each with a set of topics.

The overall objective includes Philosophy, State and Local Supervision, Advisory Committees, Curriculum and Instructional Planning, VICA, Instructional Staff, Facilities and Equipment, Personnel Services, and Special Needs.

Standards for teacher education include Institutional Characteristics, Qualifications of Trade and Industrial Teacher Educators, Internships/ Inservice, Preservice/Survival Skills, Program Competencies, Special Populations, and Sex Equity.

The standards for certification are identified as Levels I, II, and III, and address how the trade and industrial occupational competency is evaluated and the work experience requirements. Trade competency testing, initial certification requirements, and requirements for subsequent levels of certification are also addressed.

The actual program review using the standards is not complicated, once one has become familiar with the overview of the standard topics. Each topic has a standard statement to describe the standards and subsequent criteria to be used in assessing the standard.

The process for conducting a review includes checking one of three columns after each criteria. The criteria can be deemed as exceeding the standard, meeting the standard or below the standard by checking the appropriate column.

On the last page of each standard topic there is a section identified as "Summary of this topic". In this section a space is provided to record the number of criteria which are marked "Below Standard". By subtracting this number from the total number of criteria for the topic, the number of criteria that are marked "Meets Standard" and "Exceeds Standard" can be determined.

A "Program Profile" form is provided after the last page of the standards. The information recorded for each topic in the "Summary of the topic" space can then be transferred to the program profile form for an overview of the results of the program review.

A space is provided to summarize comments and provide additional information on strengths and weaknesses.

In the process of assessing trade and industrial education programs the "Program Profile" form can be used to identify topics which indicate a need for deficiency correction.

For state use the format of the standards should be compatible with state assessment forms now in use, where the present system used is satisfactory.

Finally, the topic under Program Review suggests criteria to be used as guidelines for program review and follow-up. See topic K, page 35.

STANDARDS FOR EXCELLENCE IN TRADE AND INDUSTRIAL EDUCATION

DEFINITION OF TRADE AND INDUSTRIAL EDUCATION

This definition was developed in March 1982 by the National Trade and Industrial Education Leadership Committee invited by the U.S. Department of Education for the purpose of updating the present definition appearing in Handbook VI.[1]

TRADE AND INDUSTRIAL EDUCATION - Trade and industrial education and training prepares individuals for employment in the industrial and service sectors of the economy. Trade and industrial education serves in-school and out-of-school youth and adults who need, want and may profit by instruction that prepares individuals to enter, advance or retrain for employment consistent with manpower and labor market needs. Trade and industrial occupations are classified on multiple levels of employment ranging from operatives to semi-skilled and skilled craftspersons and technicians of less than baccalaureate degree.

Trade and industrial education includes training for apprenticeable trades, technical occupations and other industrial and service occupations. These involve, but are not limited to, layout, designing, producing, processing, assembling, testing, maintaining, servicing or repairing; cooperative programs with industry; middle management, and supervisory development, entrepreneurship and other special training for industrial programs which ensure economic growth and development in the industrial sector; and emergency industrial mobilization training programs and services.

Trade and industrial education and training curriculums are derived from occupational analysis and involve the hands-on development of job skills and other complementary skills as an integral part of each curriculum related to leadership and responsibilities of citizenship through active participation in the Vocational Industrial Clubs of America, Inc. (VICA) as the recognized organization for trade and industrial education students. In addition, the curriculum includes mastery of complementary technology; related mathematics and science; technical communication skills; drawing, art and/or design; occupational safety and hygiene; labor and industrial relations and management; and other directly related and supplementary experiences. Instruction may be part-time or full-time and may be provided in a formal institution setting on the secondary and postsecondary level or cooperatively on the job.

[1]Putnam, John F., and Chismore, W Dale. Standard Terminology for Curriculum and Instruction in Local and State School Systems. State Educational Records and Reports and Reports Series, Handbook VI. U.S. Department of Health, Education, and Welfare, Office of Education, OE-23052. Washington, D.C.: U.S. Government Printing Office, 1970.

STANDARDS FOR TRADE AND INDUSTRIAL EDUCATION WHICH ARE COMMON TO ALL TRADE AND INDUSTRIAL EDUCATION INSTRUCTIONAL PROGRAMS AT THE SECONDARY AND POSTSECONDARY LEVELS.

A. PHILOSOPHY

A current, comprehensive and written philosophical statement is available and serves as a foundation and framework for trade and industrial education programs and services. Philosophical statements include planning, developing, implementing, evaluating and updating.

Please (✓) check the appropriate response

Criteria	BELOW STANDARD	MEETS STANDARD	EXCEEDS STANDARD
1. Trade and industrial education programs and services are committed to the involvement of business, industry, labor and other consultants in the development of a philosophical statement. COMMENT:			
2. Trade and industrial education programs and services are designed for initial employment and for horizontal and vertical mobility. COMMENT:			
3. Trade and industrial education programs are designed for and are accessible to in-school youth, out-of-school youth, and adults who need, who want, who elect, and who may profit by organized instruction consistent with labor market needs and employment practices. COMMENT:			
4. Trade and industrial education programs and services provide for the development of skills and knowledge in current technology. COMMENT:			
5. Trade and industrial education programs and services may provide the related technical and supplemental instruction for apprentices. COMMENT:			
6. Trade and industrial education programs and services are designed to provide leadership skills. COMMENT:			

T&I STANDARDS, OVERALL — Philosophy

	BELOW STANDARD	MEETS STANDARD	EXCEEDS STANDARD
7. Trade and industrial education programs and services are provided throughout each individual's occupational life span. COMMENT:			
8. Trade and industrial education programs and services are under public supervision with adequate provision for financial support and accessibility regardless of geographic area. COMMENT:			
9. Trade and industrial education programs and services provide for the development of computational, communication, scientific, and social experiences that are central to human resource development. COMMENT:			
10. Trade and industrial education programs are complementary to economic development and national security. COMMENT:			
11. Trade and industrial education programs are articulated with prevocational programs and apprenticeship or postsecondary programs to provide a smooth transition for any student on a career ladder in the program in which he/she is enrolled. COMMENT:			

Summary of this topic:

☐ Number of criteria for this topic

☐ Minus number marked below

☐ Total number of criteria "met" and "exceeded"

	BELOW STANDARD	MEETS STANDARD	EXCEEDS STANDARD
B. ORGANIZATION AND ADMINISTRATION, STATE SUPERVISION			
Administrators and Supervisors provide management of and direction for the trade and industrial program. These personnel perform leadership functions that ensure attainment of all program goals.			
Criteria			
1. The state supervisory staff responsible for trade and industrial programs:			
a. are certifiable trade and industrial teachers;			
b. have a minimum of 3 years successful vocational teaching experience;			
c. have successful supervisory experience in trade and industrial education at the local level;			
d. have satisfactorily completed a graduate program with a major emphasis in trade and industrial education.			
COMMENT:			
2. The state supervisory staff is responsible for the leadership development, approval, and evaluation of trade and industrial education programs and services in conformance with standards established by the state board for vocational technical education. COMMENT:			
3. The state supervisory staff responsible for the coordination and supervision of trade and industrial education recommends certification requirements for trade and industrial personnel. COMMENT:			
4. The state supervisory staff is responsible for the state administration and supervision of the Vocational Industrial Clubs of America. COMMENT:			

	BELOW STANDARD	MEETS STANDARD	EXCEEDS STANDARD
5. The state supervisory staff provides the leadership for the development and dissemination of competency or performance based curriculum for all trade and industrial programs. COMMENT:			
6. The state supervisory staff provides information, gives directions, provides standards, and implementation procedures that contribute to successful trade and industrial education programs. COMMENT:			
7. The state supervisory staff is involved, on a planned cycle (minimum of five years), in the formal evaluation of approved trade and industrial education programs for the purpose of evaluating program and employment data, curriculum, facilities, administration, and other activities necessary for the development and conduct of quality programs. COMMENT:			
8. The state supervisory staff annually determines trends, strengths and weaknesses leading to recommendations for improvement of overall trade and industrial education programs. Minimum criteria which should be considered are: enrollment, completion, placement, curriculum, instructional methods, and student competency level. COMMENT:			
9. The state supervisory staff is responsible for developing and maintaining a communications system with the teacher education institutions. COMMENT:			
10. The state supervisory staff maintains a cooperative working relationship with appropriate agencies, business, industry, labor, trade associations, business associations, citizens groups and any other agency or organization related to trade and industrial education. COMMENT:			

BEST COPY AVAILABLE

	BELOW STANDARD	MEETS STANDARD	EXCEEDS STANDARD
11. The state supervisory staff assumes leadership for developing a public information program for legislative bodies, boards of education, advisory committees and other appropriate public and private organizations to promote trade and industrial education statewide. COMMENT:			
12. The state supervisory staff provides leadership and assistance in the development and utilization of student competency testing. COMMENT:			
13. Provisions are made for state supervisory staff to annually attend national and regional trade and industrial education meetings to keep abreast of current professional developments. COMMENT:			
14. State supervisory staff provide leadership for articulation of trade and industrial programs with prevocational programs, apprenticeship programs, and postsecondary programs. COMMENT:			

Summary of this topic:

/___/ Number of criteria for this topic

-/___/ Minus number marked below

/___/ Total number of criteria "met" and "exceeded"

	BELOW STANDARD	MEETS STANDARD	EXCEEDS STANDARD
C. ORGANIZATION AND ADMINISTRATION, LOCAL SUPERVISION			
1. The governing board, administration, and instructional staff support trade and industrial education as an integral part of the system or institutional plan for vocational education. COMMENT:			
2. Trade and industrial education programs are established and maintained based on labor market information, occupational opportunities and student needs and interests. COMMENT:			
3. Sufficient funds are budgeted and expended to operate and maintain an effective trade and industrial program.			
a. The program has an annual written budget.			
b. Budgeted funds for supplies, equipment, and resource materials are sufficient to fully achieve program goals and objectives.			
c. Budgeted funds are available for professional staff development.			
d. Budgeted funds are designated to support a local VICA chapter. COMMENT:			
4. There is a certified vocational trade and industrial educator employed with the responsibility of administering and supervising trade and industrial programs. COMMENT:			
5. The person charged with the responsibility for supervision and administration of the trade and industrial programs participates in activities and decisions related to the operation of these programs. COMMENT:			

	BELOW STANDARD	MEETS STANDARD	EXCEEDS STANDARD
6. Maximum class sizes for trade and industrial programs are based on the following criteria:			
a. available space;			
b. appropriate work stations;			
c. safety considerations;			
d. type, mode and method of instruction.			
COMMENT:			
7. There is an effective public relations program that promotes the objectives, activities and accomplishments of the trade and industrial program. COMMENT:			
8. Program and fiscal records are maintained in accordance with local, state, and federal policies and guidelines. Planning and operations of trade and industrial education programs utilize standardized occupational classifications and uniform definitions. COMMENT:			
9. An occupational advisory committee provides input into the development, operation and evaluation of each specific trade and industrial education program. COMMENT:			
10. Local education agencies develop and use a three-year plan of evaluation to ensure standards of excellence for trade and industrial education programs. COMMENT:			
11. Provision is made for trade and industrial personnel to become involved in local, state, regional and national staff development activities. COMMENT:			

T&I STANDARDS, OVERALL Organization and Administration (Local)

12. Local programs are articulated with prevocational, postsecondary and/or apprentice training.
COMMENT:

Summary of this topic:

/ / Number of criteria for this topic

-/ / Minus number marked below

/ / Total number of criteria "met" and "exceeded"

BEST COPY AVAILABLE

	BELOW STANDARD	MEETS STANDARD	EXCEEDS STANDARD

D. ADVISORY COMMITTEES

A general advisory committee is formed to provide advice and counsel for the overall program of trade and industrial education at the local school level. The occupational program area advisory committee is formed to provide assistance to the trade and industrial education classroom teacher.

Criteria

1. The general advisory committee should consist of representatives from education, business, industry, labor, and the community at large.
COMMENT:

2. All advisory committees function under written guidelines which specify the length of a member's term, committee responsibilities, and operational procedures. These guidelines are reviewed annually.
COMMENT:

3. General advisory committees and occupational/technical advisory committees meet at least twice annually, and on a called basis as necessary.
COMMENT:

4. Occupational advisory committees (craft committees) are formed to strengthen the trade and industrial programs by:

   a. reviewing the curriculum;

   b. assisting with student employment opportunities;

   c. providing assistance in keeping facilities, equipment and materials current to meet changing technology;

   d. providing assistance in technical updating experiences for the instructor;

   e. strengthening public relations and community services.

COMMENT:

	BELOW STANDARD	MEETS STANDARD	EXCEEDS STANDARD
5. Occupational advisory committees (craft committees) consist of representatives who possess expertise and competency in the specified field of trade and industrial education. COMMENT:			

Summary of this topic:

/ / Number of criteria for this topic

-/ / Minus number marked below

/ / Total number of criteria "met" and "exceeded"

BEST COPY AVAILABLE

	BELOW STANDARD	MEETS STANDARD	EXCEEDS STANDARD

E. CURRICULUM AND INSTRUCTIONAL PLANNING

The curriculum in trade and industrial education is designed to prepare for entry into an occupation, promotion or upgrading in a specific occupation or cluster of occupations. It includes an outline of subject matter and/or learning experiences planned to accomplish the stated objectives.

The curriculum is based on an analysis which includes current knowledge and skills required in the occupation. The curriculum should be revised periodically by the instructor to reflect technological changes with the assistance of labor, management, advisory committees, consultants, administrators, and trade associations.

The curriculum should be identified with the Vocational Education and Occupational Information Data Systems, re: The Carl D. Perkins Vocational Education Act, Part C - Section 421, 422, and 423.

Criteria

1. The trade and industrial education program is directly related to present and future employment and career opportunities.
   COMMENT:

2. Local vocational administrators, certified trade and industrial teacher educators, representatives of state departments of education, employment and training agencies, manpower agencies, organized labor, business and industry participate in planning and revising the program of instruction.
   COMMENT:

3. Data to be considered in the curriculum plan include labor market studies, demographic information, population studies, and specific community surveys.
   COMMENT:

4. Each trade and industrial education program has a definition and a classification code that is part of the National Center for Education Statistics (NCES) vocational education data collection system.
   COMMENT:

BEST COPY AVAILABLE

	BELOW STANDARD	MEETS STANDARD	EXCEEDS STANDARD
5. Annual and/or prescribed multiple year program plans for trade and industrial education with goals, objectives, and all instructional support activities are prepared and used. COMMENT:			
6. The program objectives are stated in measurable terms and are set forth in the course of study in each curriculum. COMMENT:			
7. The content of the curriculum is based on competencies developed from an up-to-date occupational analysis validated by experts from labor and management. COMMENT:			
8. There is an annual review and assessment based on current validated skills and technical competencies. This review should include:			
a. curriculum guides;			
b. course outlines;			
c. other instructional materials.			
The review and assessment is conducted by:			
d. the occupational/technical advisory committees;			
e. vocational technical administrators;			
f. instructors and other staff members. COMMENT:			
9. Each occupational area in trade and industrial education has its own discrete set of competencies which are reflected in the curriculum. COMMENT:			

BEST COPY AVAILABLE

T&I STANDARDS, OVERALL — Curriculum and Instruction	BELOW STANDARD	MEETS STANDARD	EXCEEDS STANDARD
10. Instructional content of trade and industrial education programs includes applications of mathematics, scientific principles, oral and written communication skills and employability skills. COMMENT:			
11. Trade and industrial education programs offer opportunities for direct contact with industry, development of social awareness, interpersonal skills, citizenship and leadership skills as an integral part of the program. The opportunities are provided by the trade and industrial education teachers. COMMENT:			
12. The instructional program is supported by an annual board-approved budget that considers program needs and the number of students enrolled. Included are: a. staff compensation;			
b. facility operation and maintenance;			
c. equipment rental and purchase;			
d. materials and supplies;			
e. instructor travel;			
f. transportation expenses related to instruction;			
g. substitute teachers;			
h. instructor inservice education;			
i. VICA activities;			
j. professional and technical development;			
k. equipment maintenance;			
l. contractual services. COMMENT:			

BEST COPY AVAILABLE

	BELOW STANDARD	MEETS STANDARD	EXCEEDS STANDARD
13. A plan is developed and utilized for vertical and horizontal articulation of the curriculum with educational institutions and apprentice programs in an identified geographical area. COMMENT:			
14. A listing of recommended tools, equipment, instructional aids and reference materials is provided for each trade and industrial program. COMMENT:			
15. Current and technically accurate instructional materials and textbooks are utilized in the instructional program. COMMENT:			
16. Community resources are identified and utilized to enhance the quality of the instructional program. COMMENT:			
17. Lesson plans and/or student Learning Activities Packages are developed. They clearly state: a. instructional objectives; b. activities; c. evaluation; d. resources to be utilized during instruction. COMMENT:			
18. Instructors and students have access to, and the use of, pertinent and current printed and audio visual materials. COMMENT:			
19. Safety instruction is an integral part of the instructional program and is provided prior to student laboratory activities. COMMENT:			

	BELOW STANDARD	MEETS STANDARD	EXCEEDS STANDARD
20. Instruction in personal, tool, machine and equipment safety is documented and maintained in personnel records for each student. COMMENT:			
21. The requirements for instruction in trade and industrial education programs are determined by the manipulative, mathematical, scientific and communications skills required in the occupation.			
a. Full-time skilled preparatory trade and industrial education programs operate for a minimum of 3 consecutive periods per day for a minimum of 1080 clock hours of instruction. Where other patterns than daily classes are utilized an equivalent time block is provided.			
b. Fractionalized/skilled preparatory trade and industrial education programs operate for no less than 2 consecutive periods per day depending upon the level of skill needed for entry into employment (can be semi-skilled or limited-skill).			
c. In secondary vocational programs where mathematics and science concepts are taught as a part of the technically related instruction, one credit for mathematics and one credit for science is awarded towards graduation.			
d. Carnegie units are granted for vocational trade and industrial education classes on the same basis used for other secondary subjects.			
e. The number of students enrolled in a trade and industrial education program will be determined by the facilities, equipment, and work stations, but shall not exceed a 20:1 student to teacher ratio.			
COMMENT:			
22. Records of student completion of occupational competencies are maintained for each course, and are available to students. COMMENT:			
23. Occupational competencies achieved by students who have completed a program are measured by standardized competency based tests. COMMENT:			

BEST COPY AVAILABLE

	BELOW STANDARD	MEETS STANDARD	EXCEEDS STANDARD
24. Competency based tests are developed and validated in cooperation with an active occupational advisory committee and reflect current industrial standards. COMMENT:			
25. Trade and industrial education programs are available to all students on a equitable basis. COMMENT:			

Summary of this topic:

/___/ Number of criteria for this topic

-/___/ Minus number marked below

/___/ Total number of criteria "met" and "exceeded"

BEST COPY AVAILABLE

	BELOW STANDARD	MEETS STANDARD	EXCEEDS STANDARD

INDUSTRIAL COOPERATIVE EDUCATION

Cooperative education is a method of instruction that contributes to the student's education and to his or her employability.

The purpose of industrial cooperative education is to prepare students for employment in trade and industrial occupations. The written philosophy statement influences thought and action for the cooperative programs.

Criteria

1. Industrial cooperative education training is provided in a variety of industrial areas.
   COMMENT:

2. A certified coordinator for industrial cooperative education is employed to serve a maximum of 30 students.
   COMMENT:

3. The coordinator is active in seeking job training stations in the industrial community.
   COMMENT:

4. The coordinator has had experience both as a teacher and a skilled worker.
   COMMENT:

5. The coordinator visits the student on-the-job at least once a month, or twice during a grading period, and more often as needed.
   COMMENT:

6. An advisory committee, including representatives of both the school and community, assists in planning and coordinating the industrial cooperative education program.
   COMMENT:

	BELOW STANDARD	MEETS STANDARD	EXCEEDS STANDARD
7. Provision is made for compliance with all legal requirements relating to the employment of youth. COMMENT:			
8. Provisions are made for the cooperative student to receive in-school individual supervision and instruction for a minimum of one hour per day correlated with on-the-job work-site experience which must be at least 15 hours per week. COMMENT:			
9. Job placement is approved by the coordinator only where learning opportunities exist consistent with the student's career goals, and exploitation of the worker is unlikely. COMMENT:			
10. On-the-job experiences are planned to assist students in the development of effective theory and knowledge as well as manipulative skills. COMMENT:			
11. Secondary students enrolled in trade and industrial cooperative education programs will receive one Carnegie unit of credit for each hour of classroom instruction and one unit of credit for on-the-job experience annually. COMMENT:			
12. Provision is made to provide coordination services beyond the regular school day and school year for trade and industrial cooperative education programs. COMMENT:			
13. Schedule provisions ensure a sufficient time allotment, or block of time, in work and classroom activities to accomplish the goals of the program. COMMENT:			

	BELOW STANDARD	MEETS STANDARD	EXCEEDS STANDARD
14. Industrial cooperative programs are revised periodically in the light of the information obtained through evaluation procedures. COMMENT:			
15. A training program (memorandum) is on file for each student and is signed by the employer, student, parent, and coordinator. COMMENT:			
16. Records showing scholastic achievement, work-related experience, and employer evaluations of each student are maintained. COMMENT:			
17. Reports of the effectiveness of the on-the-job phase of the program are made periodically to the school by the employer. COMMENT:			
18. Credit toward a certificate or diploma is granted for successful completion of supervised or cooperative work, apprentice training or related apprentice instruction. COMMENT:			

Summary of this topic:

____ Number of criteria for this topic

\- ____ Minus number marked below

____ Total number of criteria "met" and "exceeded"

	BELOW STANDARD	MEETS STANDARD	EXCEEDS STANDARD

SPECIALIZED PROGRAMS FOR BUSINESS AND INDUSTRY/ADULT SUPPLEMENTARY

Vocational education administrators are strongly encouraged to be flexible in meeting the needs of business/industry. While most of the standards in the entire set apply equally well to such courses, some points are readily apparent as to be inappropriate, i.e., teacher education standards, student club activities, length of course, etc.

Criteria

1. Trade and industrial education programs make provision for business/industry oriented training programs designed to meet specific needs.
   COMMENT:

2. Specialized programs for business and industry address:

   a. the upgrading of experienced people to new technology;

   b. remedial programs to make it possible for experienced people to progress in new technology courses;

   c. programs for experienced people to progress to entirely new but specific areas of employment.

   COMMENT:

3. Adult Supplementary courses are organized around those special skills and knowledge needed to update or upgrade groups of individuals, based upon the needs of the industry or industries involved.
   COMMENT:

4. The length of Adult Supplementary courses may vary depending upon the complexity of the skills needed.
   COMMENT:

Summary of this topic:

/___/ Number of criteria for this topic

/___/ Minus number marked below

/___/ Total number of criteria "met" and "exceeded"

	BELOW STANDARD	MEETS STANDARD	EXCEEDS STANDARD
F. LEADERSHIP SKILL DEVELOPMENT FOR STUDENTS IN TRADE AND INDUSTRIAL PROGRAMS THROUGH VICA The Vocational Industrial Clubs of America (VICA) is the national organization serving the trade and industrial, technical and health occupation students. VICA is an integral part of the instructional program. Criteria			
1. Opportunities are provided for all trade and industrial students to participate in the Vocational Industrial Clubs of America (VICA) in each occupational section under the guidance of their instructors. COMMENT:			
2. The occupational sections in local VICA units provide opportunities for participation and recognition of achievement in activities at the local, district, state, national and international levels. COMMENT:			
3. VICA activities are designed to provide opportunities for a unique liaison between trade and industrial programs and labor and industry. COMMENT:			
4. VICA is an integral part of the instructional program and is financially supported from state and local sources. COMMENT:			
5. The local school administration is responsible for the administration and supervision of the Vocational Industrial Clubs of America. COMMENT:			

	BELOW STANDARD	MEETS STANDARD	EXCEEDS STANDARD
6. The local balanced VICA program includes:			
a. community service activities;			
b. public relations/publicity activities;			
c. Skill Olympics;			
d. leadership development activities;			
e. ways and means activities;			
f. safety activities;			
g. social activities.			

COMMENT:

Summary of this topic:

	Number of criteria for this topic
-	Minus number marked below
	Total number of criteria "met" and "exceeded"

	BELOW STANDARD	MEETS STANDARD	EXCEEDS STANDARD

G. INSTRUCTIONAL STAFF

The instructional staff is both professionally and technically competent to provide students with a quality, comprehensive trade and industrial program.

NOTE: See teacher education and certification program standards for more specific criteria.

Criteria

1. All trade and industrial instructors are occupationally proficient, and meet state certification requirements and recognized industry certification standards, when applicable.
   COMMENT:

2. The instructor uses available supplemental services and resources in the instructional process to help meet individual student needs.
   COMMENT:

3. The instructor is provided with information processing and other instructional support services.
   COMMENT:

4. Job descriptions are on file for all instructional staff.
   COMMENT:

5. The instructor is technically current in the occupation taught.
   COMMENT:

6. The instructor is involved in assessment of current labor market area needs, placement and follow-up for students who complete or leave a program.
   COMMENT:

T&I STANDARDS, OVERALL

Instructional Staff

	BELOW STANDARD	MEETS STANDARD	EXCEEDS STANDARD
7. The instructor is competent in planning, organizing, directing, and evaluating instruction in his/her specific programs. COMMENT:			
8. The instructor plans and implements instruction in cooperation with local industrial training coordinators, industry representatives, personnel responsible for apprentice training and other appropriate personnel. COMMENT:			

Summary of this topic:

____ Number of criteria for this topic

\- ____ Minus number marked below

____ Total number of criteria "met" and "exceeded"

	BELOW STANDARD	MEETS STANDARD	EXCEEDS STANDARD

H. FACILITIES AND EQUIPMENT

Adequate facilities and equipment are provided to assist in achieving the program goals and course objectives.

Criteria

1. Facilities and equipment for trade and industrial education programs:

   a. are readily accessible to all students to be served;

   b. are up-to-date and meet industry quality and standards;

   c. are adequate to meet the needs of the course of study and maximum class enrollment;

   d. are designed or modified to accommodate students with physical handicaps or other educational needs;

   e. are conducive to good learning activities and conform with all safety and environmental standards.

   COMMENT:

2. Adequate facility space is provided for:

   a. tool and equipment storage;

   b. materials and supplies;

   c. student work storage;

   d. instructional personnel needs;

   e. adult education classes if facilities are shared;

   f. are maintained in an orderly, safe, clean, and attractive condition.

   COMMENT:

3. An up-to-date inventory maintenance system is in place.
   COMMENT:

4. First aid services are provided and accessible to all students and staff.
   COMMENT:

	BELOW STANDARD	MEETS STANDARD	EXCEEDS STANDARD
5. Facilities and equipment meet all current local, state, and federal health and safety regulations. COMMENT:			
6. Corrective maintenance and repair is performed within a reasonable time following written notification to the appropriate administrator by the instructor. A copy of the notice is on file in the instructor's office. COMMENT:			
7. A schedule for the regular service and maintenance of equipment is followed and records are on file in the instructor's office. COMMENT:			
8. Lighting is appropriate for the activities performed within the facility. COMMENT:			

Summary of this topic:

/___/ Number of criteria for this topic

-/___/ Minus number marked below

/___/ Total number of criteria "met" and "exceeded"

	BELOW STANDARD	MEETS STANDARD	EXCEEDS STANDARD

I. PERSONNEL SERVICES FOR STUDENTS

Trade and industrial education program applicants meeting entrance requirements are served regardless of their race, sex, creed, age, or national origin. Student recruitment, enrollment and counseling services are provided to students enrolled in trade and industrial education programs to enable them to profit from the instruction and expect employment upon completion of the program.

Criteria

1. Requirements for enrollment in trade and industrial education programs do not consider the applicant's race, sex, creed, or national origin.
   Comment:

2. Trade and industrial education programs are sequential, and should begin with broad laboratory based prevocational experiences.
   COMMENT:

3. Students enrolled in trade and industrial education programs have access to guidance services.

   a. Guidance and testing services are provided to all students, to measure their interest, aptitudes and abilities, as part of the program admissions procedure.

   b. Continued guidance services are provided to students enrolled in the trade and industrial education program to assist in developing career goals.

   COMMENT:

4. A student recruitment effort is conducted to identify prospective trade and industrial education students and provide them with program and occupational information.
   COMMENT:

5. School staff assist students enrolled in trade and industrial education programs by providing information regarding:

   a. job descriptions and employee qualifications;

   b. possibilities for advancement;

   c. employment outlook;

	BELOW STANDARD	MEETS STANDARD	EXCEEDS STANDARD
d. wages and salary;			
e. job placement services;			
f. work environment;			
g. work ethics.			
COMMENT:			
6. The school has written admission policies and requirements for all trade and industrial education programs which are published and widely disseminated in the community. COMMENT:			
7. Students enrolled in trade and industrial education programs are provided the opportunity to participate in student activities. COMMENT:			
8. The trade and industrial education instructor assesses each student's progress, both in skill and related knowledge, on a regular basis and assists each student, when necessary, to obtain additional help. COMMENT:			
9. Placement services are provided for each student enrolled in the trade and industrial education program. COMMENT:			
10. Supplemental services are available to assist students with special needs to attain program goals. COMMENT:			

Summary of this topic:

▱	Number of criteria for this topic
-▱	Minus number marked below
▱	Total number of criteria "met" and "exceeded"

	BELOW STANDARD	MEETS STANDARD	EXCEEDS STANDARD

J. SPECIAL NEEDS

Special needs describes students with unique characteristics that may impede their ability to develop occupational skills. A broad understanding of these characteristics of students who are handicapped, disadvantaged, or gifted/talented is helpful to trade and industrial education instructors as they design or modify programs for special needs learners.

Criteria

1. Students identified as having special needs are provided supportive services to assist them in accomplishing their goals in trade and industrial education programs.

   a. Education methods, instructional materials and programs, and school facilities are designed or modified in order to provide individualized instruction for special needs students.

   b. The trade and industrial education instructor is provided staff assistance from special education, guidance, school psychologists and rehabilitation services and is assisted by a teacher aide or other personnel in the laboratory.

   c. Students identified as special needs are provided learning activities consistent with their abilities.

   COMMENT:

2. In those cases where an Individualized Education Program (IEP) is required, it shall be based on an assessment of the occupational requirements and student abilities by the IEP team.

   a. The IEP team will include the trade and industrial education teacher or designated representative at the time educational objectives are being written and at the annual update during the time the student is in the program.

   b. The IEP will be reviewed and revised periodically by the IEP team.

   COMMENT:

Summary of this topic:

____	Number of criteria for this topic
-____	Minus number marked below
____	Total number of criteria "met" and "exceeded"

	BELOW STANDARD	MEETS STANDARD	EXCEEDS STANDARD
K. PROGRAM REVIEW			
A systematic, continuous evaluation program exists and utilizes standards to assess all elements of trade and industrial education programs.			
Criteria			
1. Each trade and industrial education curriculum is reviewed annually and forms the basis for the assessment of equipment and facilities, instructional activities, job placement, utilization of advisory committee, and institutional support. COMMENT:			
2. Results obtained from program curriculum review are used to promote, develop and improve the instructional program. COMMENT:			
3. A written course of action is developed for overcoming each deficiency. COMMENT:			
4. Recommendations for correcting deficiencies are reported to appropriate decision makers. COMMENT:			

	BELOW STANDARD	MEETS STANDARD	EXCEEDS STANDARD
5. The state staff in cooperation with teachers and teacher educators annually evaluate the preservice and inservice needs of teachers of vocational trade and industrial education. These activities include but are not limited to:			
a. student teaching centers;			
b. technical competencies;			
c. professional and pedagogical competencies;			
d. occupational experience;			
e. effective use of VICA in the classroom;			
f. competencies for teaching students who are handicapped, academically disadvantaged, or limited English proficient.			
COMMENT:			

Summary of this topic:

____ Number of criteria for this topic

-____ Minus number marked below

____ Total number of criteria "met" and "exceeded"

STANDARDS FOR TRADE AND INDUSTRIAL EDUCATION TEACHER EDUCATION PROGRAMS

BELOW STANDARD	MEETS STANDARD	EXCEEDS STANDARD

The primary objective of trade and industrial teacher education standards is to develop and/or improve the teaching skills of trade and industrial education teachers who are teaching or preparing to teach at the secondary, postsecondary or apprentice levels. These individuals should be occupationally competent and should have been given instruction in, as well as demonstrated, essential teaching tasks.

A. INSTITUTIONAL CHARACTERISTICS

Institutions approved to provide teacher education/professional development for the trade and industrial teacher recognize the nontraditional characteristics of the majority of trade and industrial education teachers and provide programs and services to students in the teacher education program to enable them to perform the skills or tasks essential to successful teaching in a trade and industrial program.

Criteria

1. The trade and industrial education teacher education program maintains and utilizes a Program Advisory Committee.
   COMMENT:

2. The Program Advisory Committee is made up of instructors, administrators, state staff, students and business/industry/labor.
   COMMENT:

3. The institution has an agreement with a national or state occupational competency testing service under which occupational assessment is provided.
   COMMENT:

4. The trade and industrial education teacher education program has an established policy relative to evaluation of the occupational experience for the purpose of granting college or university credit.
   COMMENT:

5. A system exists to evaluate the occupational experience of candidates for the teacher education program based on the state requirements for certification.
   COMMENT:

BEST COPY AVAILABLE

	BELOW STANDARD	MEETS STANDARD	EXCEEDS STANDARD
6. The major/technical skills are identified to ensure that an individual has acquired the necessary competencies reflecting the area in which he/she is seeking certification and will teach (i.e., a teaching major). COMMENT:			
7. A file is maintained by the institution for each applicant's occupational experience verification. COMMENT:			
8. Preservice education consisting of a minimum of 30 clock hours and a program of inservice, on-site teacher assistance will be provided during the first year of service for trade and industrial education personnel. COMMENT:			
9. The trade and industrial education teacher education program uses a performance or competency based system of instruction and assessment for all students. COMMENT:			
10. The institutional plan for the student teaching experience provides for trade and industrial education teacher educators to select the site and supervise student teachers for those individuals who are pursuing baccalaureate degrees or otherwise require a laboratory/ student teaching/field experience to meet certification requirements. COMMENT:			

T&I STANDARDS, TEACHER EDUCATION — Institutional Characteristics

	BELOW STANDARD	MEETS STANDARD	EXCEEDS STANDARD
11. Institutional support for trade and industrial education teacher education programs is evident through the following criteria:			
a. adequate travel funds;			
b. adequate faculty;			
c. adequate support staff;			
d. interagency cooperation;			
e. adequate operating expenses;			
f. professional and technical development;			
g. qualified trade and industrial education program leader.			

COMMENT:

Summary of this topic:

/ Number of criteria for this topic

\- / Minus number marked below

/ Total number of criteria "met" and "exceeded"

	BELOW STANDARD	MEETS STANDARD	EXCEEDS STANDARD

B. QUALIFICATIONS OF TRADE AND INDUSTRIAL EDUCATION TEACHER EDUCATORS

Trade and industrial education teacher educators shall have expertise and experiences in trade and industrial education.

Criteria

1. Trade and industrial education teacher education faculty members have been certified teachers in a trade and industrial education program area and meet existing state requirements for a trade and industrial education teacher certificate.
   COMMENT:

2. Teacher education faculty members possess a minimum of a master's degree with an emphasis in trade and industrial education.
   COMMENT:

3. Faculty members shall have at least three years of successful trade and industrial education teaching experience, in a state approved program.
   COMMENT:

Summary of this topic:

____ Number of criteria for this topic

\- ____ Minus number marked below

____ Total number of criteria "met" and "exceeded"

	BELOW STANDARD	MEETS STANDARD	EXCEEDS STANDARD
C. INTERNSHIPS/INSERVICE			
Inservice is a critical component of the initial preparation and continuing education of trade and industrial education teachers and is provided to all trade and industrial education teachers.			
Criteria			
1. Trade and industrial education teacher education programs provide leadership for teachers to return to trade and industry, workshops, and specialized schools to update technical competencies. COMMENT:			
2. Trade and industrial education teacher education programs provide inservice activities for the continuing development of professional and occupational competencies. COMMENT:			
3. Trade and industrial education teacher education programs provide instruction to meet the unique professional development needs of the person making the transition from industry and the trades to become a trade and industrial education teacher. COMMENT:			

Summary of this topic:

▱	Number of criteria for this topic
-▱	Minus number marked below
▱	Total number of criteria "met" and "exceeded"

D. COMPETENCY PROFILE FOR PRESERVICE/SURVIVAL SKILLS

The trade and industrial education teacher education program identifies and provides the survival skills and competencies that a beginning trade and industrial education teacher should have prior to teaching. This could include an intensive one or two week workshop or orientation program that is designed to provide emergency assistance for the beginning trade and industrial teacher who has no training in professional vocational education course work.

Criteria

	BELOW STANDARD	MEETS STANDARD	EXCEEDS STANDARD
1. The survival skills/preservice competencies in the trade and industrial teacher education program include:			
a. employ the principles of learning as applied to teaching;			
b. demonstrate methods and/or techniques of teaching trade and industrial education subjects;			
c. conduct an occupational analysis;			
d. develop a weekly instructional plan;			
e. prepare lesson plans;			
f. develop and effectively use instructional sheets;			
g. use of teaching aids;			
h. use of audio-visual aids;			
i. provide instruction at students' level and rate of learning;			
j. select instructional materials and references suited to students' levels and interests;			
k. select appropriate jobs and other learning activities based on students' needs, aptitudes, interests and abilities;			
l. evaluate and record students' achievements;			
m. maintain progress charts and records of individual student achievement;			

	BELOW STANDARD	MEETS STANDARD	EXCEEDS STANDARD
n. develop and implement a safety and first aid program;			
o. use safety practices in teaching the operation of equipment;			
p. develop students' positive attitudes toward safe practices and safety consciousness in job performance;			
q. implement and maintain a VICA chapter.			
COMMENT:			

NOTE: The preservice/survival skills help the new trade and industrial teacher make the initial transition from industry to the classroom; at the same time the trade and industrial teacher education program competencies might include some of the same skills. The regular teacher education program is designed to cover the skills and knowledge in depth; consequently it could include skills listed in the preservice list. A competency based program with individualized modules is designed to provide the flexibility to meet individual needs.

Summary of this topic:

/ Number of criteria for this topic

\- / Minus number marked below

/ Total number of criteria "met" and "exceeded"

	BELOW STANDARD	MEETS STANDARD	EXCEEDS STANDARD

E. TRADE AND INDUSTRIAL EDUCATION TEACHER EDUCATION PROGRAM COMPETENCIES

A teaching competency is defined as the knowledge, skills, and attitudes necessary to perform a critical teaching task. Successful performance as a teacher requires a solid understanding of both one's technical subject matter area and competence in the professional teaching skills and knowledge. While both types of learning are essential to teachers, in competency based programs, the focus is on acquiring the teaching skills needed to carry out the instructional process effectively.

The following competencies have been identified as part of the certification requirements for students enrolled in trade and industrial teacher education programs and are the result of extensive research.

The Performance Based Teacher Education (PBTE) system is based on 100 modules which incorporate 384 originally validated competencies. This study was conducted by The National Center for Research in Vocational Education.*

Criteria

Students enrolled in the trade and industrial education teacher education program develop the following competencies:

1. Program Planning

a. Interpret and use findings of community surveys;			
b. Organize, operate, utilize, and maintain a program advisory committee.			
COMMENT:			

2. Program Development

a. Utilize occupational analysis;			
b. Identify and utilize planning information from available resources;			
c. Develop program goals and objectives which reflect correct industry practices;			
d. Utilize appropriate student information in program planning.			
COMMENT:			

*Available from American Association for Vocational Institutional Materials, 120 Engineering Center, The University of Georgia, Athens, Georgia 30602.

	BELOW STANDARD	MEETS STANDARD	EXCEEDS STANDARD
3. Development of a Course of Study			
a. Prepare course description and outline;			
b. Develop student performance objectives;			
c. Develop units of instruction;			
d. Determine students' needs and interests;			
e. Select, prepare and utilize instructional materials;			
f. Develop lesson plans and structure learning activities.			
COMMENT:			
4. Instructional Execution			
a. Demonstrate competence in managing individualized instruction in actual instructional settings;			
b. Demonstrate competence in conducting small and large group instruction;			
c. Demonstrate ability to direct students in laboratory experiences;			
d. Demonstrate manipulative skill in teaching a lesson;			
e. Demonstrate the ability to present a complete classroom lesson;			
f. Operate and incorporate the use of audio-visual equipment in instructional programs;			
g. Develop and use media materials;			
h. Exhibit the ability to stimulate student interest through good questioning and discussion techniques;			
i. Maintain student discipline;			
j. Develop student leadership activities.			
COMMENT:			

	BELOW STANDARD	MEETS STANDARD	EXCEEDS STANDARD
5. Laboratory Management			
a. Maintain student competency and attendance records;			
b. Provide a safe instructional environment;			
c. Provide instruction in safety attitudes and practices and maintain appropriate records;			
d. Plan and manage a program budget;			
e. Plan and manage a supply, tool and equipment inventory;			
f. Develop and implement a plan for preventive maintenance and equipment replacement;			
g. Maintain good housekeeping practices in the lab and classroom;			
h. Develop a student duty roster system;			
i. Develop and manage student work stations;			
j. When appropriate, manage customer service;			
k. Demonstrate a knowledge of teacher liability.			
COMMENT:			

	BELOW STANDARD	MEETS STANDARD	EXCEEDS STANDARD
6. Vocational Industrial Clubs of America, Inc. (VICA)			
To establish, supervise and conduct a VICA student organization that encompasses a balanced program of work:			
a. Incorporate VICA as an integral part of the instructional program;			
b. Encourage and motivate students to participate in VICA activities that include public relations, community service, safety, and social awareness;			
c. Prepare VICA members for leadership roles;			
d. Assist students in developing and financing a yearly program of work;			
e. Coordinate VICA activities with business and industry;			
f. Coordinate skill olympics and other student recognition activities.			
COMMENT:			
7. Student Evaluation			
a. Establish student performance criteria;			
b. Assess student attitudes, knowledge and skill development;			
c. Develop instruments for assessing technical and manipulative skills;			
d. Determine grades and/or evidence of mastery;			
e. Keep student records;			
f. Use the results of standardized measuring instruments for student assessment;			
g. Assess student performance in apprentice training programs.			
COMMENT:			

	BELOW STANDARD	MEETS STANDARD	EXCEEDS STANDARD
8. Program Evaluation			
a. Utilize a student follow-up study;			
b. Utilize an employer follow-up study;			
c. Determine the extent to which the program meets current occupational needs;			
d. Identify the components of a comprehensive programs evaluation system.			
COMMENT:			
9. Knowledge of Related Organizations and Agencies			
a. Student organizations;			
b. Professional organizations and trade associations;			
c. Government agencies and civic organizations;			
d. Private Industry Councils (PIC);			
e. Business, industry and labor;			
f. Training resources;			
g. Apprentice training.			
COMMENT:			

	BELOW STANDARD	MEETS STANDARD	EXCEEDS STANDARD
10. Principles of vocational education include the following topics as they relate to trade and industrial education.			
a. History;			
b. Philosophy;			
c. Legislation;			
d. Local/state structure;			
e. Articulation;			
f. Student recruitment;			
g. Student placement;			
h. Student guidance;			
i. School/community relations;			
j. Employability skills;			
k. Current issues and future trends;			
l. Community resources;			
m. Cooperative/internship programs;			
n. Labor Department services and programs;			
o. Apprentice programs.			
COMMENT:			
11. Industrial cooperative education competencies:			
a. Enroll students in industrial cooperative program;			
b. Secure training stations for the industrial cooperative prog[illegible]			

	BELOW STANDARD	MEETS STANDARD	EXCEEDS STANDARD
c. Establish guidelines for the industrial cooperative programs which include:			
• placement of students on-the-job;			
• attendance;			
• transfers and terminations;			
• evaluation procedures;			
• employer-employee relations.			
d. Prepare for student related instruction;			
e. Coordinate on-the-job instruction;			
f. Establish linkages with apprentice and preapprentice programs.			

COMMENT:

Summary of this topic:

/___/ Number of criteria for this topic

-/___/ Minus number marked below

/___/ Total number of criteria "met" and "exceeded"

	BELOW STANDARD	MEETS STANDARD	EXCEEDS STANDARD

F. SPECIAL POPULATIONS AWARENESS AND INFORMATION

Students in trade and industrial education teacher education programs develop instruction for disadvantaged and handicapped students in trade and industrial education.

Criteria

1. Work with psychologists and other professionals to interpret reports.
   COMMENT:

2. Describe legal basis for disadvantaged and handicapped education.
   COMMENT:

3. Describe roles of lay and professional persons.
   COMMENT:

4. Define handicapping conditions.
   COMMENT:

5. Adapt tools and equipment for the handicapped.*
   COMMENT:

6. Participate in the IEP process.
   COMMENT:

*"Catalog for Adaptation of Machinery and Tools for Handicapped Students" is available from the University of Wisconsin Vocational Studies Center in Madison, Wisconsin.

	BELOW STANDARD	MEETS STANDARD	EXCEEDS STANDARD
7. Describe model programs.			
a. Mainstreaming;			
b. Separate/specialized;			
c. Institutionalization;			
d. Individualized instruction.			
COMMENT:			
8. Identify special education support services that are available. COMMENT:			

Summary of this topic:

▱	Number of criteria for this topic
-▱	Minus number marked below
▱	Total number of criteria "met" and "exceeded"

	BELOW STANDARD	MEETS STANDARD	EXCEEDS STANDARD

G. SEX EQUITY

The trade and industrial teacher education program actively recruits eligible nontraditional candidates to become trade instructors.

CRITERIA

1. Trade and industrial education instructors are encouraged to play a key role to increase the enrollment of nontraditional candidates in trade and industrial education programs.
   COMMENT:

2. Trade and industrial education instructors identify successful models for recruitment, placement and retention of female students in trade and industrial education programs or male students in predominantly female programs.
   COMMENT:

3. Trade and industrial education instructors describe sex equity concepts that may be successfully incorporated into trade and industrial education programs.
   COMMENT:

Summary of this topic:

/ Number of criteria for this topic

\- / Minus number marked below

/ Total number of criteria "met" and "exceeded"

STANDARDS FOR CERTIFICATION OF SHOP, LABORATORY, CLASSROOM AND RELATED TEACHERS OF TRADE AND INDUSTRIAL EDUCATION PROGRAMS

	BELOW STANDARD	MEETS STANDARD	EXCEEDS STANDARD
The language to describe the various levels of teaching credentials available to teachers of trade and industrial subjects includes various terms in different states. It is not the intent of this project to suggest uniform language for all states, but to determine the minimum recommended requirements for the various levels that should be available to the teacher of trade and industrial subjects. At the same time, recognition should be made of the wide variance in background and/or credentials this individual brings to his/her first teaching position.			
A. LEVEL I CERTIFICATION Standards appropriate for the certification of the trade and industrial teacher who is entering teaching are established.			
Criteria			
1. The applicant possesses a high school diploma or General Education Development (GED) certificate. COMMENT:			
2. The applicant shows evidence of successful occupational proficiency and completion of an appropriate learning period such as a registered apprenticeship, military training, secondary and/or postsecondary, or on-the-job experience in the occupation to be taught. COMMENT:			
3. Work experience is evaluated as follows: a. The applicant verifies at least five years of successful wage-earning experience in the occupation to be taught; AND			
b. The wage-earning experience reflects those tasks performed by incumbent workers in the occupation; AND			
c. Three years of wage-earning experience are within the past five years. COMMENT:			

	BELOW STANDARD	MEETS STANDARD	EXCEEDS STANDARD
4. The trade and industrial education teacher exhibits personal qualities that contribute to the fulfillment of professional responsibilities.			
a. The trade and industrial education teacher adheres to a written code of ethics related to performances of professional teaching responsibilities;			
b. The trade and industrial education teacher demonstrates adequate and appropriate written and oral language skills;			
c. The trade and industrial education teacher demonstrates positive leadership skills in the classroom, school, and the profession;			
d. The trade and industrial education teacher adheres to acceptable school policies and practices regarding personal appearance.			
COMMENT:			
5. The applicant demonstrates occupational competency through validated current journeyman level or equivalent trade competency examinations. The examinations shall:			
a. include oral, written, and performance components;			
b. be administered by qualified professionals;			
c. be completed prior to employment as a teacher.			
COMMENT:			
6. For those occupations requiring state or federal licensure, the applicant holds such a license at the time of application for certification, and maintains the license during the validity of the certificate.			
COMMENT:			
7. Nondegree and noneducational degree teachers complete a beginning teacher's workshop dealing with basic classroom/laboratory survival and management skills prior to assuming teaching responsibilities.			
COMMENT:			

BEST COPY AVAILABLE

	BELOW STANDARD	MEETS STANDARD	EXCEEDS STANDARD
8. The applicant annually participates in professional development, continuing education or occupational update activities to maintain the validity of Level I Certification. He/she completes at least an 18 semester hour planned sequence (or equivalent quarter hours) of professional education courses during the validity of Level I, consisting of those competencies specified under Teacher Education standard D - Competency Profile Preservice/Survival Skills; or E - Trade and Industrial Teacher Education Program Competencies. COMMENT:			
9. The Level I Certificate is valid for no more than three (3) years and is nonrenewable. COMMENT:			

Summary of this topic:

____ Number of criteria for this topic

-____ Minus number marked below

____ Total number of criteria "met" and "exceeded"

	BELOW STANDARD	MEETS STANDARD	EXCEEDS STANDARD
B. LEVEL II CERTIFICATION STANDARDS The trade and industrial teacher continues professional development activities to maintain certification. Criteria			
1. The applicant has demonstrated acceptable teaching ability during the validity of the Level I Certificate and has been recommended by the employing agency for Level II Certification. COMMENT:			
2. The applicant completes 24 semester hours or equivalent quarter hours of professional vocational courses approved by the state certifying agency. The 24 semester hours include instruction and demonstrated competence in program planning and development, instructional planning and execution, laboratory management, student evaluation, student organizations, program evaluation, and the principles and philosophy of vocational education. Up to 12* of the 24 credits may be earned through successful completion of a nationally recognized occupational competency examination. *Note: After Level II, the balance of credit earned through successful completion of a competency examination may be used as determined by an institution offering a trade and industrial teacher education program. Normally this would be accepted as part of the degree requirements. COMMENT:			
3. Level II certified trade and industrial instructors annually participate in occupational and professional continuing education activities to maintain occupational and teaching proficiency. These activities may include:			
a. industry sponsored training programs;			
b. independent study;			
c. college courses;			
d. contract teaching for industry;			
e. military training programs;			
f. inservice workshops. COMMENT:			

BEST COPY AVAILABLE

	BELOW STANDARD	MEETS STANDARD	EXCEEDS STANDARD
4. The Level II Certificate is valid for no more than three (3) years and is nonrenewable.			
COMMENT:			

Summary of this topic:

▱	Number of criteria for this topic
-▱	Minus number marked below
▱	Total number of criteria "met" and "exceeded"

	BELOW STANDARD	MEETS STANDARD	EXCEEDS STANDARD
C. LEVEL III CERTIFICATION STANDARDS			
The trade and industrial education teacher is particularly vulnerable to obsolescence in his/her program and should be given every opportunity to keep current in his/her field. At the same time his/her teacher preparation should culminate in the same academic standards as that of any other teacher in the public schools.			
Criteria			
1. The applicant has demonstrated at least two years of acceptable teaching ability during the validity of the Level II Certificate and has been recommended by the employing agency for Level III Certification. COMMENT:			
2. During the five-year validity of the Level III certificate:			
a. The applicant completes an additional 18 semester hours or equivalent quarter hours of professional and occupational development activities of which a minimum of 240 clock hours must be in directly related occupational training;			
b. All professional and occupational development activities are approved by the appropriate state certifying agency.			
COMMENT:			
3. The Level III Certificate is valid for no more than five (5) years and may be renewed every five (5) years upon completion of a combination of six semester hours or equivalent quarter hours of professional vocational courses and state-approved occupational updating activities, and the recommendation of the employing agency with input from the advisory committee. COMMENT:			

BEST COPY AVAILABLE

	BELOW STANDARD	MEETS STANDARD	EXCEEDS STANDARD
4. The state educational agency responsible for approving trade and industrial education programs develops/adopts a certification standard to ensure that experienced trade and industrial education teachers will be updated annually in their occupational teaching area. COMMENT:			

Summary of this topic:

/ / Number of criteria for this topic

-/ / Minus number marked below

/ / Total number of criteria "met" and "exceeded"

BEST COPY AVAILABLE

PROGRAM PROFILE

PLACE THE INFORMATION RECORDED FOR EACH TOPIC IN THE "SUMMARY OF TOPICS" SPACE ON THIS PROFILE FOR AN OVERVIEW OF THE RESULTS OF THE PROGRAM REVIEW.

	SUMMARY OF TOPICS		
	NUMBER OF CRITERIA FOR THIS TOPIC	MINUS NUMBER MARKED BELOW	TOTAL NUMBER OF CRITERIA MET AND EXCEEDED
I. STANDARDS FOR TRADE AND INDUSTRIAL EDUCATION WHICH ARE COMMON TO ALL TRADE AND INDUSTRIAL EDUCATION INSTRUCTIONAL PROGRAMS AT THE SECONDARY AND POSTSECONDARY LEVELS			
A-PHILOSOPHY.			
B-ORGANIZATION AND ADMINISTRATION, STATE SUPERVISON			
C-ORGANIZATION AND ADMINISTRATION, LOCAL SUPERVISON			
D-ADVISORY COMMITTEE.			
E-CURRICULUM AND INSTRUCTIONAL PLANNING			
INDUSTRIAL COOPERATIVE EDUCATION.			
SPECIALIZED PROGRAMS FOR BUSINESS AND INDUSTRY/ADULT. . . .			
F-LEADERSHIP DEVELOPMENT FOR STUDENTS IN TRADE AND INDUSTRIAL PROGRAMS THROUGH VICA.			
G-INSTRUCTIONAL STAFF			
H-FACILITIES AND EQUIPMENT.			
I-PERSONNEL SERVICES FOR STUDENTS			
J-SPECIAL NEEDS			
K-PROGRAM REVIEW.			
TOTAL:			
II. STANDARDS FOR TRADE AND INDUSTRIAL EDUCATION TEACHER EDUCATION PROGRAMS			
A-INSTITUTIONAL CHARACTERISTICS			
B-QUALIFICATIONS OF TRADE AND INDUSTRIAL EDUCATION TEACHER EDUCATORS			
C-INTERNSHIPS/INSERVICE			
D-COMPETENCY PROFILE PRESERVICE/SURVIVAL SKILLS			
E-TRADE AND INDUSTRIAL TEACHER EDUCATION PROGRAM COMP			
F-SPECIAL POPULATIONS AWARENESS AND INFORMATION			
G-SEX EQUITY.			
TOTAL:			
III. STANDARDS FOR CERTIFICATION OF SHOP, LABORATORY, CLASSROOM AND RELATED TEACHERS OF TRADE AND INDUSTRIAL EDUCATION			
A-LEVEL I			
B-LEVEL II.			
C-LEVEL III			
TOTAL:			

BEST COPY AVAILABLE

PROGRAM PROFILE

SUMMARY OF COMMENTS

ACKNOWLEDGMENTS

This project has involved the efforts of many persons. The major groups of professionals who contributed to the development, validation, and final set of standards presented in this document are recognized here. These are (a) project staff, (b) technical advisory group, (c) validation committee, (d) expert committee, and (e) review committee.

Representation in effect at the time the groups were formed.

STANDARDS PROJECT STAFF

Members of the project staff are listed below. The individuals gave their time, attention and expertise to the project.

Special thanks to Stephanie L. Barton, Editorial Assistant, in memoriam.

Larry W. Johnson
Chief Executive Officer

Harold E. Lewis
Project Director

Ethel M. Smith
Administrative Project Coordinator

Harry F. Davis
Consultant, Overall Program Objective. Former Ohio State Supervisor, Trade and Industrial Education

Duane G. Jansen
Consultant, Teacher Education Standards Objective. Colorado State University

Edward D. Cory
Consultant, Teacher Certification Standards Objective. Michigan Department of Education

K. Kurt Eschenmann
Validation Consultant. Virginia Polytechnic Institute and State University

Rosemary Haley
Editorial Consultant. Leesburg, Virginia

Nicholas O. Akinkuoye
Graduate Research Assistant, Virginia Polytechnic Institute and State University

Gary M. Diehl
Director, Conference Department

Stephen Denby
Senior Executive Officer

Meredith C. Hentschel
Special Populations Coordinator

Thomas W. Holdsworth
Executive Officer, Communications Division

Janet M. Manthos
Communications Division

Karen N. Pierce
Editorial Assistant

Elizabeth M. Allison
Finance/Personnel Supervisor

Sylvia J. Merchant
Office Manager

Keith K. Ashby
Materials Services

Robert L. Johnson
Printing and Production Services

Barbara K. Crandall
Secretarial Staff, part-time

Debra B. Jenkins
Project Secretary

Tammi J. Kennedy
Secretarial Staff

Ada M. Kranenberg
Secretarial Staff

Acknowledgments

A major strength of this project was the involvement of many individuals representing a geographic cross section of trade and industrial educators at the secondary and postsecondary levels comprised of instructors, local administrators, state staff, teacher educators, and professional organizations. Also involved were people who are on the receiving end of trade and industrial educators' efforts-those who employ our students from business, industry, and labor.

TECHNICAL ADVISORY GROUP

The Technical Advisory Group was the primary committee that provided technical assistance throughout the length of the project. They served the project in two formal meetings and informal phone conversations and correspondence. Their support and dedication is appreciated.

Ben L. Baines
Associate Director, Trade and Industrial Education, Virginia State Department of Education, Richmond, VA, and President, Board of Directors, Vocational Industrial Clubs of America, Inc.

Anthony J. Bevacqua
Director, Occupational Program Services, North Carolina State Board of Community Colleges, Raleigh, NC

William Clarke
Instructor, Machine Shop, Fontana High School, Fontana, CA

William E. Dugger, Jr.
Professor and Program Area Leader, Virginia Polytechnic Institute and State University, Blacksburg, VA, and Director, Standards for Industrial Arts Programs Project

Melvin J. France
Consultant, Secondary Unit, Trade and Industrial Education, Michigan State Department of Education, Lansing, MI

Burck E. Grosse
General Director - Technical Service, General Motors Corporation, Detroit, MI

Madeleine B. Hemmings
Vice President for Policy, National Alliance of Business, Washington, DC

Edwin Henry
Specialist, Trade and Industrial Education, Kansas Department of Education, Topeka, KS, and President, National Association of State Supervisors for Trade and Industrial Education

Harry Holloway
Associate Professor, Vocational Education and Technology Department, Mississippi State University, Mississippi State, MS

Larry W. Johnson
Chief Executive Officer, Vocational Industrial Clubs of America, Inc., Leesburg, VA

Donald M. Klippstein
Vice President, Marketing and Planning, Multigraphics, Mt. Prospect, IL

Joseph W. Lemley
Superintendent, Tulsa County Area Vocational Technical School, Tulsa, OK

BEST COPY AVAILABLE

Acknowledgments

Gary D. Parris
Instructor, High Plains Area Vocational Technical School, Woodward, OK, and President, National Association of Trade and Industrial Instructors

Charles L. Payne
Chancellor, Alabama Department of Postsecondary Education, Montgomery, AL

Robert A. Robison
Director, Trade and Industrial Education, Missouri Department of Education, Jefferson City, MO, and Vice President, Trade and Industrial Division of the American Vocational Association

John L. Scott
Associate Professor and Head, Department of Trade and Industrial Education, University of Georgia, Athens, GA, and President, National Association of Industrial and Technical Teacher Educators

Dorothy Shields
Director, Department of Education, AFL/CIO, Washington, DC

Elwyn G. Wheat
Associate State Superintendent of Education, Vocational Education, Mississippi State Department of Education, Jackson, MS

James H. Wiblin
Assistant Director, Trade and Industrial Education Service, Ohio Department of Education, Columbus, OH, and National Association of Trade and Industrial Education, Secretary to the Board of Directors

VALIDATION COMMITTEE

The validation committee met for a three-day workshop to validate the standards. They served, along with the three other committees, without compensation for their time and effort by providing expertise to the validation process. Their assistance is appreciated by the staff and the trade and industrial profession.

Ivan Armstrong
State Supervisor, Trade and Industrial Education, Oklahoma State Department Education, Stillwater, OK

Ron Baugh
Director, Industrial Education Unit, Kentucky Department of Education, Frankfort, KY

C. Raymond Bell, Jr.
Assistant Director for Trade and Industrial Programs, Louisiana State Department of Education, Trade and Industrial Education, Baton Rouge, LA

M. Doyle Butler
Division Head, Trade and Industrial/Health Occupations, Texas A&M University System, College Station, TX

Robert H. Carrigan
President, American Technical Publishers, Inc., Alsip, IL

Bob Dixon
Instructor/Program Coordinator, Chemeketa Community College, Salem, OR

Don Eshelby
Director, Planning and Evaluation, Idaho State Board for Vocational Education, Boise, ID

BEST COPY AVAILABLE

Acknowledgments

Nevin Frantz, Jr.
Director, Division of Vocational and Technical Education, Virginia Polytechnic Institute and State University, Blacksburg, VA

Ted Gasper
Director, Chester County Career Center, Chester, SC

Stoney Gray
Student, Calhoun Community College, Decatur, AL

Roger W. Haskell
Professor, Technological and Adult Education, University of Tennessee, Knoxville, TN

Michael Hataway
Instructor, Commercial Arts, Hinds Junior College, Raymond, MS

Bobby Henderson
State Supervisor, Trade and Technical Education, Mississippi State Department of Education, Jackson, MS

Frank House
Program Coordinator, Industrial Education, Orange County School District, Orlando, FL

Frederick Humphreys
Vice President of Training, Home Builders Institute, National Association of Home Builders, Washington, DC

N. Charles Kalb
National Educational Coordinator, Cascade Graphics Development, Atlanta, GA

Bill Jackson
Assistant Superintendent, High Plains Area Vocational School, Woodward, OK

Robert Lykens
Principal, Kent County Vocational-Technical School District, Dover, DE

William A. Matz
State Supervisor, Trade and Industrial Education, Delaware Department of Public Instruction, Vocational Division, Dover, DE

Donald McKay
Associate Professor, Industrial Education, Iowa State University, Ames, IA

Milton Miller
Coordinator, Industrial Education, University of Missouri, Columbia, MO

William T. Newblom
State Board for Community Colleges and Occupational Education, Denver, CO

Robert Newman
Assistant Superintendent, Ocean County Vocational Technical Schools, Toms River, NJ

Ray Norris
Air/Conditioning Instructor, Central Missouri State University, Warrensburg, MO

Andrew Phillips
Director, National Joint Apprenticeship Training Committee, Lanham, MD

John Pippo
Trade and Industrial Insructor, Western Delaware BOCES, Sidney Center, NY

Arnold Potthast
Director, Bureau of Program Development and Operations, Wisconsin Board of Vocational, Technical, and Adult Education, Madison, WI

James B. Rosebrook
Associate Professor, University of Georgia, Athens, GA

Acknowledgments

Donald L. Thomas
Instructor, Vocational Carpentry, Central Kansas Area Vocational-Technical School, Hutchinson, KS

Hobson Walden
District Trade and Industrial Education Specialist, Alabama State Department of Education, Montgomery, AL

Michael S. Walsh
Marketing Manager, Goodheart-Willcox Company, Inc., South Holland, IL

EXPERT COMMITTEE

The committee of experts met for a three-day workshop to recommend the initial draft of the standards after review of the comments and recommendations from the item pool sent to the review committee. Their dedication to this task is greatly appreciated.

T. Chris Almeida
Program Manager, Industrial, Health, and Apprenticeship, California State Department of Education, Sacramento, CA

Eugenio Basualdo
Department of Vocational-Technical Education, SUNY Oswego, Oswego, NY

David S. Bonde
State Director, Division of Vocational-Technical Education, Pierre, SD

Nancy J. Breckenridge
Tulsa County Area Vocational Technical School, Tulsa, OK

Betty Brunelle
Assistant Director, Instructional Operations, Moraine Park Technical Institute, Fond Du Lac, WI

Carrol E. Burchinal
Director and Executive Officer, Vocational Education, North Dakota State Board of Vocational Education, Bismarck, ND

Don Decherd
Machine Trades Instructor, Muskingham Area Joint Vocational School, Zanesville, OH

Lester G. Duenk
Professor, Division of Vocational and Technical Education, Virginia Polytechnic Institute and State University, Blacksburg, VA

Kenneth R. Edwards
Director-Skill Improvement Department International Brotherhood of Electrical Workers, Washington, DC

Gary L. Fletcher
Director, Manpower Development, Brick Institute of America, Reston, VA

Eugene G. Hornberger
Manager, Welding and Fusing, Newport News Shipbuilding, Newport News, VA

Thomas Kiah
Director of Vocational/Technical Centers, Detroit Public Schools, Central Administration, Detroit, MI

Franklin J. King
Professor of Industrial Education, University of Missouri, Columbia, MO

Charles W. Nichols
Professor, Department of Vocational Education, Kent State University, Kent, OH

C. Thomas Olivo
Professor Emeritus, Temple University. Albany, NY

BEST COPY AVAILABLE

Acknowledgments

Douglas L. Richardson
Supervisor, Trade and Industrial Education, New Mexico State Department of Education, Santa Fe, NM

Talmadge L. Rushing
Program Director, Industrial Education, Florida Department of Education, Tallahassee, FL

Frank M. Santoro
Deputy Assistant Commissioner, Rhode Island Department of Education, Providence, RI

Frank Steckel
Training Coordinator, Electrical Industrial Association, Boone, NC

Kenneth D. Thompson
Education Program Specialist, Industrial Education, Arizona State Department of Education, Phoenix, AZ

John Van Zant
Administrator, Occupational Education/Regional Occupational Program, Ventura, CA

Donald C. Vought
Supervisor, Training, Tools, and Service Standards, Mack Trucks, Inc., Allentown, PA

Patrick E. White
Principal, Central Kentucky State Vo-Tech School, Lexington, KY

Scott D. Whitener
Director, Center for Occupational Education, Ferris State College, Big Rapids, MI

Alvin Wilbanks
Director of Vocational Education, Gwinnette County Public Schools, Lawrenceville, GA

Earl F. Williams
Trade and Industrial Education Coordinator, Georgia State Department of Education, Atlanta, GA

REVIEW COMMITTEE

The first drafts of standards in item pool form were mailed to the review committee for review/comments which were then tabulated and presented to the expert committee for discussion and recommendations. This review of the items provided the initial refinement of the material based on the literature review. Their assistance and input at this critical point in the development of the standards provided the frame work for future development, and is greatly appreciated.

Thomas H. Arcy
Technical Education Department, University of Houston, Houston, TX

Robert A. Armes
Masonry Instructor, Clinton Area Vocational-Technical School, Clinton, MO

John W. Brandt
Supervisor, Trade and Industrial Education, Pennsylvania State Department of Education, Harrisburg, PA

Richard K. Crosby
Department of Occupational and Career Education, University of Louisville, Louisville, KY

Bill P. Daniels
Supervisor, Trade and Industrial Education, Vocational Education Division, Dayton Public Schools, Dayton, OH

BEST COPY AVAILABLE

Acknowledgments

Charles W. Easley
Supervisor, Trade and Industrial Education, Arkansas Department of Education, Little Rock, AR

Rupert N. Evans
Professor of Education and Technical Education, University of Illinois, Champaign, IL

Thomas O. Harris
Dean of Occupational Education, St. Philip's College, San Antonio, TX

Roger W. Haskell
Professor, Vocational and Technical Education, The University of Tennessee, Knoxville, TN

Raymond Hill
Chairman, Department of Adult and Vocational Education, Division of Trade and Industrial Education, University of South Florida, Tampa, FL

Terry L. Holden
Industrial Cooperative Instructor, Portales High School, Portales, NM

Gary J. Hoppes
Instructor, Industrial Technologies, Kirkwood Community College, Cedar Rapids, IA

David E. Horn
Manager, Training and Development, Kearney and Trecker Corporation, Milwaukee, WI

Jesse L. Hudson
Chairman, Vocational Technical Education, Pittsburg State University, Pittsburg, KS

Mary A. Jolley
Vice President for Development, Trident Technical College, Charleston, SC

Tommy Jones
Auto Mechanics Instructor, Brazosport High School, Freeport, TX

Alice V. McAlliley
Supervisor Teacher, Chester High School, Chester, PA

William D. McGee
Instructor, Varina High School, Richmond, VA

Gary D. Meers
Special Vocational Needs, Division of Industrial Education, University of Nebraska, Lincoln, NE

Charles E. Newton
State Specialist, Trade and Industrial Education, Alabama Department of Education, Montgomery, AL

Philip Polivchak
President, Home Builders Institute, National Association of Home Builders, Washington, DC

Russell H. Riley
Instructor, Academic Faculty for Vocational-Technical Education, Ohio State University, Columbus, OH

Larry L. Steele
Instructor, Warren Occupational Technical Center, Golden, CO

Richard L. Sullivan
Trade and Industrial Teacher Educator, Central State University, Edmond, OK

Richard VanGulick, Jr.
Education Program Specialist, Trade and Industrial, New Jersey Department of Education, Trenton, NJ

BEST COPY AVAILABLE

SELECTED REFERENCES

Adamsky, Richard A. and Cotrell, Calvin J. Vocational Teacher Education: A Review of the Research. Information Series 185; National Center for Research in Vocational Education, Ohio State University; 1979.

The Advisory Committee and Vocational Education. American Vocational Association; August 1969.

"An Analysis of National Certification Requirements and Professional Development Standards for Vocational Education Personnel. Phase II of a Professional Development Study for Massachusetts, Volume III." Boston University School of Education; September 1977; page 36

Barlow, Melvin L. History of Industrial Education in the United States. Peoria, Illinois: Charles A. Bennett Company, Inc.; 1967.

Brock, Robert J. Preparing Vocational and Special Education Personnel to Work with Special Needs Students. State of the Art, 1977-79 (Longitudinal Study). Wisconsin University-Stout, Menomonie. Sponsoring Agency: Bureau of Education for the Handicapped (DHEW/OE), Washington, D.C.; 1979, page 63.

Carl D. Perkins Vocational Education Act. Public Law 98-524. October 19, 1984.

Catalog for Adaptation of Machinery and Tools for Handicapped Students. Available from the University of Wisconsin Vocational Studies Center in Madison, Wisconsin.

Chalupsky, Albert B.; Phillips-Jones, Linda; and Danoff, Malcolm N. Competency Measurement in Vocational Education: A Review of the State of the Art. American Institutes for Research; June 1981.

Conserva, Inc. Improvement of Related Instruction in Apprenticeship Programs. Raleigh, North Carolina. Available from Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. Instructor Training Materials, 10 booklets. Apprentice Core Materials, 10 booklets. Cost $3 - $10 per title.

Education Amendments of 1976. 94th Cong., 2nd Sess., Washington, D.C.; 1976.

Evans, Rupert N. "Reauthorization and Redefinition of Vocational Education." VocEd-Journal of American Vocational Association, Vol. 56, No. 1; January, 1981, pp. 30-34.

Finch, Curtis R. Review and Synthesis of Research in Trade and Industrial Education. Third Edition; The Ohio State University; 1983.

Klein, Raymond S. and others. "Establishing the Appropriateness and Adequacy of Selected NOCTI Occupational Competency Tests." Journal of Vocational Education Research, v. 5, n. 2; Spring, 1980.

Nasman, Leonard O. A Model Package to Assess the Education and Training Needs of Business, Industry, and Labor. Columbus, Ohio: The Ohio State University, The National Center for Research in Vocational Education; A Project of the Postsecondary Alliance of Institutions/Districts; March, 1981.

Selected References

The National Association for Trade and Industrial Education. National Standards for Program Administration, Supervision and Implementation. National Association for Trade and Industrial Education, Leesburg, Virginia; 1977.

The National Association for Trade and Industrial Education. Trade and Industrial Education: National Standards for Program Administration Supervision and Implementation. National Association for Trade and Industrial Education, Leesburg, Virginia, 1977.

The National Commission of Excellence in Education. A Nation at Risk. Report to the Nation and the Secretary of Education. U.S. Department of Education, April, 1983.

The National Commission on Secondary Vocational Education. The Unfinished Agenda: The Role of Vocational Education in the High School. Published by The National Center for Research, Information Series No. 289.

Performance Based Teacher Education. The National Center for Research in Vocational Education, The Ohio State University. Available from American Association for Vocational Institutional Materials, 120 Engineering Center, The University of Georgia, Athens, Georgia 30602.

Standards for Vocational Home Economics Education. Austin, Texas: Department of Home Economics, The University of Texas at Austin; June 1981.

Standards for Industrial Arts Programs Project. Standards for Industrial Arts Programs. American Industrial Arts Association, Reston, Virginia.

Standards for Quality Vocational Programs in Agricultural/Agribusiness Education. Ames, Iowa: Iowa State University, Agricultural Education Department; 1977.

Standards for State Approval of Teacher Education, Proposed Minimum Standards for State Approval of Teacher Preparing Institutions. State Board for Elementary and Secondary Education; Circular No. 351, Sixth Edition, 1976; A Project of the National Association of State Directors of Teacher Education and Certification.

"The Status of the NOICC/SOICC Network: September 30, 1980." NOICC Administrative Report No. 5, April 1981.

The Teacher's Role Recruiting Women into Trade and Industrial Programs. Sponsored by the Trade and Industrial Division and Public Information Section of the American Vocational Association, Washington, D.C.

Terry, Thomas P. and Davis, Paul D. A Descriptive Analysis of Pre-service Needs of Trade and Industrial Education Teachers. Department of Vocational and Adult Education, Auburn University, Auburn, Alabama; 1980.

VPO - Vocational Preparation and Occupations; 3rd Edition, Vol. 1. Published by National Occupational Information Coordinating Committee (NOICC); Washington, D.C.; 1982.

Whitener, Scott D. "National Occupational Competency Testing Institute: Tenth Annual Report." Big Rapids, Michigan; 1983.

BEST COPY AVAILABLE

☆U.S. GOVERNMENT PRINTING OFFICE : 1985 O - 473-272

The Vocational Industrial Clubs of America (VICA) is the national organization for students enrolled in trade, industrial, technical, and health occupations programs. It serves students in public high schools, area vocational schools, community and junior colleges, and other postsecondary institutions. VICA activities are an integral part of these vocational programs incorporating leadership, citizenship, and character development programs and activities into the curriculum. As advocates for these students, VICA is the link between vocational education and industry, and serves teachers, business, industry, and organized labor.

BEST COPY AVAILABLE

May 1985